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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JEFFREY S. HAAS, DOUGLAS E. HOWARD,  
JOEL D. ECKELS, and PETER J. NUNES

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Appeal 2009-010994  
Application 10/788,558<sup>1</sup>  
Technology Center 1700

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Decided: May 28, 2010

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Before MICHAEL P. COLAIANNI, KAREN M. HASTINGS, and  
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

COLAIANNI, *Administrative Patent Judge*.

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<sup>1</sup> The subject matter in this appeal appears to be related to the subject matter in Appeal Nos. 2009-009407 (U.S. Patent Application No. 11/179,436), which was decided February 19, 2010, and 2009-010888 (U.S. Patent Application No. 11/159,451), which was decided March 24, 2010.

### DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1 through 24. Claims 25 and 26, the other claims pending in this application, stand withdrawn from consideration by the Examiner. We have jurisdiction pursuant to 35 U.S.C. § 6.

We AFFIRM-IN-PART.

### STATEMENT OF THE CASE

The subject matter on appeal is directed to a tester for testing explosives. Claim 1 is illustrative:

1. A tester for testing for explosives associated with a test location, comprising:
  - a first explosives detecting reagent;
  - a first reagent holder and dispenser, said first reagent holder and dispenser containing said first explosives detecting reagent;
  - a second explosives detecting reagent;
  - a second reagent holder and dispenser containing said second explosives detecting reagent;
  - a sample collection unit for exposure to said test location, exposure to said first explosives detecting reagent, and exposure to said second explosives detecting reagents; and
  - an environment unit for receiving said sample collection unit and processing said sample collection unit for testing the test location for the explosives, said environment unit being a heater or dryer for heating said sample collection unit.

As evidence of unpatentability of the claimed subject matter, the Examiner relies upon the following references:

Dietze	5,035,862	Jul. 30, 1991
Kardish	5,648,047	Jul. 15, 1997

Applicants' admitted prior art (Specification, pp. 12, 22, and 23, hereinafter "AAPA").

The Examiner maintains the rejection of claims 1-24 under 35 U.S.C. § 103(a) over Kardish, Dietze, and AAPA.

Appellants focus their arguments on independent claims 1 and 13 and do not separately argue any of the dependent claims. *See* 37 C.F.R. § 41.37(c)(1)(vii) (stating, *inter alia*, that "[a] statement which merely points out what a claim recites will not be considered an argument for separate patentability for a claim"). Accordingly, we address Appellants' arguments regarding the rejection with respect to claims 1 and 13 only. *Id.*

### *Claim 1*

### ISSUES

The issues are as follows: (1) Did the Examiner reversibly err in determining that the combination of the applied prior art references would have rendered obvious a tester having the "environmental unit being a heater or dryer" feature required by claim 1 within the meaning of § 103? and (2) If so, then would the obviousness rejection considered anew in light of Appellants' arguments and evidence of secondary considerations have been probative of nonobviousness? We decide these issues in the negative.

### FINDINGS OF FACT (FF)

We adopt the Examiner's findings as our own, except as to those findings that we expressly overturn or set aside in the Analysis that follows. We add the following findings:

1. Appellants do not specifically dispute the Examiner's findings related to Kardish on pages 4-5 of the Answer. (*Compare* Ans. 4-5 with App. Br. 11-24 and Reply Br.<sup>2</sup> 1-10). In this regard, Kardish teaches a "hand-held device for rapid colorimetric [sic, colorimetric] detection of explosives, narcotics and other chemicals." (Kardish, col. 1, ll. 63-65). Kardish teaches a feeding reel, which is engaged to a roll of substrate, and take-up reel, where the feeding reel and take-up reel advance a substrate along a sampling area so that a sample may be wiped onto a segment of a substrate. (Kardish, col. 5, ll. 30-65 and col. 7, ll. 14-45). After wiping, the feeding reel and take-up reel are used to advance the segment of the substrate to a testing area. *Id.* Kardish teaches that reagents are then dispensed via dispensing mechanisms to contact the sampled material in order to "permit colorimetric reaction to take place provided that the sampled material contains the tested chemical." (Kardish, col. 7, ll. 39-40)
2. Kardish teaches that "[a]ny chemical having a matching colorimetric detecting reagent can be detected using [the] device of the present invention." (Kardish, col. 7, ll. 60-62) (item number omitted).
3. Appellants do not specifically dispute the Examiner's finding that

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<sup>2</sup> Since the pages of the Reply Brief are not numbered, we number, consecutively, all of the pages of the Reply Brief starting with 1 at the page entitled "Appellants' REPLY BRIEF (37 C.F.R. § 1.192)."

Dietze teaches a heater that is placed in thermal contact with a test strip in order to achieve rapid and selective heating of individual test fields on the test strip (abstract). Further Dietze states it is frequently desirable to heat test fields to an elevated temperature during a reaction. This leads to an acceleration of the reaction and an increase in detection sensitivity (col. 1, lines 45-47).

(*Compare* Ans. 5 with App. Br. 11-24 and Reply Br. 1-10). In this regard, Dietze teaches an analytical system to evaluate a color change caused by the reaction of a fluid, which may be blood or urine, and a reagent. (Dietze, col. 1, ll. 7-21, col. 3, ll. 1-56, and col. 4, ll. 9-12). Dietze also teaches heating the fluid to an elevated temperature with heaters to accelerate the reaction between a fluid and a reagent and to increase detection sensitivity. (Dietze, col. 1, ll. 7-21, 45-47, and col. 3, ll. 35-50).

4. Appellants do not specifically dispute the Examiner's conclusion that it would have been obvious to one having an ordinary skill in the art at the time of the invention to modify Kardish to employ a heater that is below and in thermal contact with the test strip in order to provide rapid and selective heating of the sample on the test strip.

(*Compare* Ans. 5-6 with App. Br. 11-24 and Reply Br. 1-10).

Appellants further do not specifically dispute that in view of the teachings of AAPA and Dietze, one of ordinary skill in the art would have modified Kardish to employ a heater to heat a reaction and thus accelerate the reaction time and increase detector sensitivity (*Compare* Ans. 6 with App. Br. 11-24 and Reply Br. 1-10). The Examiner finds that it is well known that adding heat accelerates a reaction and shortens waiting times, which remains uncontested. *Id.*

5. Appellants do not specifically dispute the Examiner's finding that  
Regarding the dryer . . . [i]t is well known in the art as admitted  
by the instant specification that dryers are employed for this  
purpose. The Appellant submits on page[s] 22-23, dryer[s] are  
well known in the art and need not be discussed here. The  
Appellant is referring to dryers and heaters for specifically  
drying sample when applied to the sample surface.  
(*Compare* Ans. 6 with App. Br. 11-24 and Reply Br. 1-10).
6. Appellants do not specifically dispute the Examiner's determination  
that "it would have been obvious to one having an ordinary skill in the  
art at the time of the invention to modify Kardish to employ a dryer on  
the sample substrate to dry the reaction product so that a colorimetric  
determination can be made." (*Compare* Ans. 5-6 with App. Br. 11-24  
and Reply Br. 1-10).

Additional findings of fact may appear in the Analysis that follows.

#### PRINCIPLES OF LAW

Under 35 U.S.C. § 103, the question is whether the claimed invention  
as a whole would have been obvious to one of ordinary skill in the art.  
*Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1536-1537 (Fed. Cir.  
1983).

"[O]ne cannot show non-obviousness by attacking references  
individually where . . . the rejections are based on combinations of  
references." *In re Keller*, 642 F.2d 413, 426 (CCPA 1981).  
(Fed. Cir. 1994).

As stated in *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*;

For secondary considerations to have probative value, the  
decision maker must determine whether there is a nexus  
between the merits of the claimed invention and the secondary

considerations. Under the circumstances of this case, Ashland's proffered [sic, proffered] evidence of secondary considerations cannot properly be considered in reaching a conclusion on obviousness/nonobviousness unless the decision maker first determines that these secondary considerations are relevant to the subject matter as claimed.

776 F.2d 281, 306 n. 42 (1985) (citations omitted).

Establishing long-felt need requires objective evidence that a problem existed in the art for a long period of time without solution. The relevance of long-felt need and the failure of others to the issue of obviousness depends on several factors. First, the need must have been a persistent one that was recognized by those of ordinary skill in the art. *In re Gershon*, 372 F.2d 535, 539 (CCPA 1967). Second, the long-felt need must not have been satisfied by another before the invention by applicant. *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1988). Third, the invention must in fact satisfy the long-felt need. *In re Cavanagh*, 436 F.2d 491, 496 (CCPA 1971).

If evidence of commercial success is relied upon, Appellants must offer proof “that the sales were a direct result of the unique characteristics of the claimed invention-as opposed to other economic and commercial factors unrelated to the quality of the patented subject matter.” *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996).

Evidence of licensing as a secondary consideration are not infallible guides to patentability and such evidence must be carefully appraised as to its evidentiary value. *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 907-08 (Fed. Cir. 1985). Licenses may be negotiated for reasons unrelated to the unobviousness of the licensed subject matter. *Id.*

## ANALYSIS AND CONCLUSION

### *ISSUE (1)*

Appellants argue that

The "Kardish" and "Dietze" and "Alleged Prior Art" references do not show or suggest Applicants' limitations "an environmental unit for receiving said sample collection unit and processing said sample collection unit for testing the test location for the explosives, said environmental unit being a heater or dryer for heating said sample collection unit (Claim 1)" . . . . The Kardish reference does not show any structure serving as "an environmental unit . . . receiving . . . and processing . . . said sample collection unit . . . for testing the test location for explosives, said environmental unit being a heater or dryer ..." The Dietze reference has nothing to [do] with detection of explosives and does not show any structure serving as "an environmental unit for receiving said sample collection unit and processing said sample collection unit for testing the test location for the explosives, said environmental unit being a heater or dryer."

(App. Br. 12-13). Appellants also argue that there is no reason to combine the applied prior art references because

[t]he Dietze reference has nothing to do with detection of explosives, does not show or suggest Appellants' tester apparatus for testing for explosives, and there would be no reason for combining Dietze with Kardish. Dietze describes a blood and urine analytical system in which a test carrier has at least one metallic conducting layer and the evaluating instrument has an induction heater that produces an alternating magnetic field. The Kardish device does not utilize the Dietz [sic] test carrier with at least one metallic conducting layer and the Kardish device does not need the Dietz [sic] alternating magnetic field.

(App. Br. 14).

Appellants arguments improperly focus on the teachings of the Kardish, Dietze, and AAPA individually instead of addressing what their combined teachings would have suggested to one of ordinary skill in the art (App. Br. 12-14), and are thus of no persuasive merit. *Keller*, 642 F.2d at 425.

In this regard, Appellants have failed to address and thus failed to identify error with the Examiner's stated findings and reason (*See* FF 1-6) for arriving at a tester comprising, *inter alia*, the "environmental unit being a heater" feature or the "environmental unit being a . . . dryer" feature recited in claim 1. (*See* FF 1-6).

For example, with respect to the "environmental unit being a heater" feature recited in claim 1, Kardish teaches a hand-held device for rapid colorimetric detection of "explosives, narcotics and other chemicals." (FF 1). This detection of "explosives, narcotics and other chemicals" is performed via, *inter alia*, dispensing mechanisms to dispense reagents to "permit colorimetric reaction to take place provided that the sampled material contains the tested chemical." (FF 1). Kardish also teaches that "[a]ny chemical having a matching colorimetric detecting reagent can be detected using [the] device of the present invention." (FF 2).

While Kardish does not explicitly mention the use of an environmental unit such as a heater, Dietze teaches an analytical system to evaluate a color change caused by the reaction of a fluid, which may be blood or urine, and a reagent using, *inter alia*, a heater (environmental unit) to accelerate the reaction and to increase detection sensitivity. (FF 3). This

finding comports with the Examiner's additional statement that it is well known to use heat to accelerate a reaction and thus shorten reaction time. (FF 4).

Therefore, we, agree with the Examiner that it would have been obvious to one having an ordinary skill in the art at the time of the invention to employ a heater (environmental unit) in Kardish's hand-held device in order to, *inter alia*, accelerate the reaction between a fluid and a reagent and increase detection sensitivity as taught by AAPA and Dietze. (FF 3 and 4). Accordingly, Appellants' arguments are unpersuasive of reversible error.

In addition Appellants argue that "the Final Rejection . . . does not provide reasons for combining the Alleged Prior Art with Dietze or Kardish." (App. Br. 14). Contrary to Appellants' argument, in reference to our above discussion, the Examiner explicitly provides a reason for combining Kardish, Dietze, and AAPA. (FF 4 and 6). Thus, Appellants' argument is unpersuasive of reversible error.

Thus, it follows that the Examiner did not reversibly err in determining that the combination of the applied prior art references would have rendered obvious a tester having the "environmental unit being a heater or dryer" feature required by claim 1 within the meaning of § 103.

#### *ISSUE (2)*

Appellants refer to Exhibits 1 through 10 in their "EVIDENCE APPENDIX" section of the Appeal Brief and argue that

The secondary considerations that the invention of Applicants' claims 1-24 has been licensed and has obtained commercial success, has obtained recognition by peers and has obtained praise by others, and

fulfills an important and long felt need are substantial. . . . The secondary considerations overcome the rejection of Applicants' claims 1-24 on appeal under 35 U.S.C. § 103(a) over the Kardish, Dietze, and the Alleged Prior Art references.

(App. Br. 23; *see also* Reply Br. 6-7). In that regard, Appellants rely on Exhibits 1 through 5 to show that Appellants' invention has been licensed and obtained commercial success; Exhibits 6 through 8 to show that Appellants' invention has obtained recognition and praise by others; and Exhibits 9 and 10 to show that Appellants' invention fulfills a long felt need.

It is well settled that for secondary considerations to have probative value, there must be an adequate nexus between the claimed invention and the secondary considerations. *See Ashland Oil*, 776 F.2d at 306 n. 42.

We agree with the Examiner's determination at page 11 of the Answer that Appellants have not established an adequate nexus between the claimed invention and any of Appellants' evidence of secondary consideration.

With respect to Appellants' Declarations (i.e., Exhibits 1 and 2), which are relied upon to show that Appellants were able to obtain a license on "patent application IL-11088" (i.e., Appellants' docket number for the instant application) despite the fact that a patent was not yet issued, Appellants do not allege much less direct us to any persuasive evidence that this license on "patent application IL-11088" was obtained as a *result* of the claimed features of the invention as opposed to some other reason unrelated to patentability. *EWP Corp.*, 755 F.2d at 907-08.

Indeed, page 2 of the Declaration by Catherine Elizondo (Exhibit 1) states that the claimed invention of the instant application is merely "[o]ne of the inventions licensed by the license agreement" and page 3 of the

Declaration by Eddie E. Scott (Exhibit 2) states that the claimed invention of the instant application is merely "one of the patent applications licensed."

Thus, we agree with the Examiner's determination that the quality of the "nexus" between the claimed invention and the licensing evidence in each of Appellants' Exhibits 1 and 2 is weak.

With respect to Appellants' Exhibits 3 through 5, which are relied upon by Appellants to show commercial success, Appellants do not persuasively explain how any of the evidence of commercial success directly resulted from a unique characteristic of the claimed invention.

In this regard, page 1 of Exhibit 5 states that the E.L.I.T.E.<sup>TM</sup> (hereinafter ELITE), Model EL 100 is an "R&D 100 AWARD WINNER 2006." However, Exhibit 5's page 3 states that a heater (which is recited in claim 1) is merely "optional" to the Model EL 100 and that this optional heater may be a battery powered heater (having a separate model no. EL100-BPH) or a heating jig (having a separate model no. EL100-BLH). Indeed, as correctly stated by the Examiner, "the ELITE model EL 100 shown in the secondary evidence . . . only mentions the *option* of a heater being employed is a butane lighter or battery powered heater (page 3, Evidence 5.)." (Ans. 11) (emphasis added).

In addition, Exhibit 3 states that the "detector is just two inches by three inches and slightly thicker than a credit card," Exhibit 4 at page 2 states that the ELITE detector may be "the size of a 2-inch by 3-inch index card," and Exhibit 5 states that its EL 100 is "pocket-sized," however, the claimed invention is not limited to any size (i.e., two inches by three inches or pocket-sized) or thickness (i.e., credit card).

Moreover, Appellants in alleging commercial success do not provide any sales data much less any of the required proof “that . . . sales were a direct result of the unique characteristics of the claimed invention.” *Huang*, 100 F.3d at 140. Indeed, as correctly stated by the Examiner at page 11 of the Answer, “[t]he Applicant has not provided any financial figures to show commercial success.”

Thus, we, like the Examiner, determine that the quality of the “nexus” between the claimed invention and each of Appellants' Exhibits 3 through 5 is weak.

With respect to Appellants' Exhibits 6 through 8, which are relied upon to show “recognition by peers and praise by others,” Exhibits 6 through 8 show that the ELITE card includes features that are not required by the claimed apparatus and that those features are at least partially responsible for whatever recognition and praise the ELITE card has achieved.

For example, while Appellants' Exhibits 6 through 8 collectively disclose that the ELITE *card* technology won the 2006 R&D 100 Award for new technology and a 2006 Excellence in Technology Transfer Award from the Federal Laboratory Consortium (FLC), the claimed invention is not limited to such a structure (i.e., a card).

In addition, Exhibit 6 at page 2 and Exhibit 7 at page 2 state that the ELITE card uses reagents that provide a long shelf-life. The claimed invention, however, is not limited to these specific reagents.

Also, Exhibit 6 at page 2 states that since “the cost of detection technology is a critical issue,” the ELITE card has the advantage of being inexpensive. Appellants, however, have not explained how the limitations

recited in claim 1 necessarily lead to a product that can be made inexpensively.

Thus, we, like the Examiner, determine that the quality of the “nexus” between the claimed invention and each of Appellants' Exhibits 6 through 8 is weak.

With respect to Appellants' Exhibits 9 and 10 relied upon to show "long felt need," Appellants do not persuasively explain how this "long felt need" is relevant to the claimed invention.

In this regard, Exhibit 9 dated Aug. 23, 2006, states that there is a "need for detection of those who possess . . . explosives . . . The manufacturers of the [explosive] detection devices for the military have focused their efforts on miniaturization of existing devices . . . [so that they are] easy to move from place to place." Exhibit 10 dated July 2005 states that that there is a "need for explosives detection systems technologies . . . [such as a] hand held explosives detection device."

Appellants, however, do not persuasively explain how these needs (i.e., explosives detection devices that are easy to move or hand-held) are relevant to the claimed invention, which do not require that the tester be hand-held or easy to move.

Moreover, it is well settled that establishing long-felt need requires, *inter alia*, objective evidence that a problem existed in the art for a long period of time *without solution*. See *Gershon*, 372 F.2d at 539; *Newell Cos*, 864 F.2d at 768; and *Cavanagh*, 436 F.2d at 496.

In the instant case and contrary to Appellants' argument, Kardish, the primary reference applied in the Examiner's rejection, was issued on Jul. 15,

1997, and is directed to a *hand-held* device (where being hand-held is known to make the device easy to move) for rapid colorimetric detection of *explosives*. Thus, Kardish solves these identified problems (i.e., need for a hand-held and easy to move explosives detection device) in 1997, which is approximately eight years before Appellants' effective filing date.

Accordingly, based on the factual findings set forth in the Answer and above, we determine that the preponderance of evidence weighs most heavily in favor of obviousness of the subject matter defined by claim 1 within the meaning of 35 U.S.C. § 103.

Thus, we sustain the Examiner's rejection of claims 1-12 under 35 U.S.C. § 103(a) over Kardish, Dietze, and AAPA.

### *Claim 13*

#### ISSUE

Did the Examiner err in determining that the combination of the applied prior art references would have rendered obvious the tester comprising the "flat disk sample collection pad" feature required by claim 13 within the meaning of § 103? We decide this issue in the affirmative.

#### ANALYSIS AND CONCLUSION

The Examiner states that

Regarding claim 13 and the disk shaped sample pad. Such change in shape is not considered a novel patentable feature because this is simply a matter of choice, which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed shape of the sample pad was significant. *In re Dailey*,

357 F.2d 669, 149 USPQ 47 (CCPA 1966). The disk shape of a sample pad provides no patentable distinction over the *rectangular test pad configuration of Kardish*. The rectangular and round sample pads are interchangeable equivalents.

(Ans. 7) (emphasis added).

Contrary to the Examiner's statement, Kardish teaches using a *roll* of substrate having a segment where a sample may be wiped. (FF 1). The Examiner does not direct us to any credible teaching in Kardish regarding a "rectangular test pad configuration."

Nor does the Examiner provide any credible reason to modify Kardish's roll of substrate to have a circular pad as required by the "flat *disk* sample collection pad" feature recited in claim 13. (See FF 1) (emphasis added). Indeed, as Appellants correctly state, "Applicants' 'flat disk sample collection pad' is very different from the Kardish 'roll 22 of substrate 20.'" (App. Br. 15).

In addition, the Examiner does not rely upon or explain how any of the additional applied prior art references teaches or would have suggested the disputed claim feature.

Thus, it follows that the Examiner erred in determining that the combination of the applied prior art references would have rendered obvious the tester comprising the "flat disk sample collection pad" feature required by claim 13 within the meaning of § 103.

Accordingly, for the reasons stated by Appellants in the Briefs and above, we reverse the Examiner's decision rejecting claims 13-24 under 35 U.S.C. § 103(a) over Kardish, Dietze, and AAPA.

ORDER

For the above reasons, we sustain the Examiner's rejection of claims 1-12 under 35 U.S.C. § 103(a) over Kardish in view of Dietze and AAPA and reverse the Examiner's rejection of claims 13-24 under 35 U.S.C. § 103(a) over Kardish in view of Dietze and AAPA.

Accordingly, the Examiner's decision is affirmed-in-part.

TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1) (2009).

AFFIRMED-IN-PART

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